

SEQUENCE LISTING

<110> CANON KABUSHIKI KAISHA, et al.

<120> Kit for immobilizing organic substance, organic substance-immobilized structure,
and manufacturing methods therefor

<130> 10002556W001

<150> JP2004-016858

<151> 2004-01-26

<160> 181

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Gln Ser Ser Ile Thr Thr Arg Asn Pro Phe Met Thr
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Phe Met Asn His His Pro Asn Ser Gln Gln Tyr His
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Gln Tyr Thr Ser Ser Gly Ile Ile Thr Ser Ser Ala
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His His His Pro Glu Asn Leu Asp Ser Thr Phe Gln
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Gln Pro His Met His Arg Ser Ser His Gln Asp Gly
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Asn Thr Thr Met Gly Pro Met Ser Pro His Ser Gln
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Ala Ala His Phe Glu Pro Gln Thr Met Pro Met Ile
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Asp His Gln Leu His Arg Pro Pro His Met Met Arg
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Ser Val Ser Val Gly Met Lys Pro Ser Pro Arg Pro
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Thr Val Pro Ile Tyr Asn Thr Gly Ile Leu Pro Thr
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Tyr Thr Met His His Gly Ser Thr Phe Met Arg Arg
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Ser Met Met His Val Asn Ile Arg Leu Gly Ile Leu
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Met Met Gln Arg Asp His His Gln His Met Arg Arg
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Met Lys Thr His His Gly Asn Asn Ala Val Phe Leu
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Leu Glu Pro Leu Pro His Thr Pro Arg Met Tyr Ala
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<400> 25

Trp Met Thr Lys Met Pro Thr Thr His Thr Arg Tyr
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His His Pro Met Tyr Ser Met Thr Arg Ala Leu Pro
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Gly Ser Ala His Ser Arg Asn Asp Ala Ala Pro Val
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His Ser Pro Leu Met Gln Tyr His Met Ser Gly Thr
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Thr Ala His Met Thr Met Pro Ser Arg Phe Leu Pro
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<400> 30

Ala Cys Pro Pro Thr Gln Ser Arg Tyr Cys
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<211> 10

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Ala Cys Asn Gly Met Leu Ala Phe Gln Cys

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<400> 32

Ala Cys Thr Pro Lys Pro Gly Lys His Cys

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<210> 33

<211> 1680

<212> DNA

<213> Pseudomonas cichorii YN2 ; FERM BP-7375

<400> 33

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<210> 34

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<212> DNA

<213> *Pseudomonas cichorii* YN2 ; FERM BP-7375

<400> 34

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 catggcctgc gccacccgt gcacaccgcg cgacacgct tgaactggg tggtaactg 180
 ggacgcgtgt tgctggcgga caccctgcat cccaccaacc cgcaagaccg tcgcttcgac 240
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 cagaagcagg tcaagagctg gatcgacgaa agcaaatga gcccgatga ccgcgcccgt 360
 gcgcacttcg cgttcgccct gctcaacgat gccgtgtcgc cgtccaacag cctgtcfaat 420
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 gtgccgccac agatcaacaa gtactacatt ttgacctca gccccataa cagcttcgtc 720
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<213> *Pseudomonas cichorii* YN2 ; FERM BP-7375

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Met Ser Asn Lys Ser Asn Asp Glu Leu Lys Tyr Gln Ala Ser Glu Asn
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 20 25 30

Ala Ser Ala Arg Met Val Leu Arg Gln Ala Ile Lys Gln Pro Val His
 35 40 45

Ser Val Lys His Val Ala His Phe Gly Leu Glu Leu Lys Asn Val Leu
50 55 60

Leu Gly Lys Ser Gly Leu Gln Pro Thr Ser Asp Asp Arg Arg Phe Ala
65 70 75 80

Asp Pro Ala Trp Ser Gln Asn Pro Leu Tyr Lys Arg Tyr Leu Gln Thr
85 90 95

Tyr Leu Ala Trp Arg Lys Glu Leu His Asp Trp Ile Asp Glu Ser Asn
100 105 110

Leu Ala Pro Lys Asp Val Ala Arg Gly His Phe Val Ile Asn Leu Met
115 120 125

Thr Glu Ala Met Ala Pro Thr Asn Thr Ala Ala Asn Pro Ala Ala Val
130 135 140

Lys Arg Phe Phe Glu Thr Gly Gly Lys Ser Leu Leu Asp Gly Leu Ser
145 150 155 160

His Leu Ala Lys Asp Leu Val His Asn Gly Gly Met Pro Ser Gln Val
165 170 175

Asn Met Gly Ala Phe Glu Val Gly Lys Ser Leu Gly Val Thr Glu Gly
180 185 190

Ala Val Val Phe Arg Asn Asp Val Leu Glu Leu Ile Gln Tyr Lys Pro
195 200 205

Thr Thr Glu Gln Val Tyr Glu Arg Pro Leu Leu Val Val Pro Pro Gln
210 215 220

Ile Asn Lys Phe Tyr Val Phe Asp Leu Ser Pro Asp Lys Ser Leu Ala
225 230 235 240

Arg Phe Cys Leu Arg Asn Asn Val Gln Thr Phe Ile Val Ser Trp Arg
245 250 255

Asn Pro Thr Lys Glu Gln Arg Glu Trp Gly Leu Ser Thr Tyr Ile Glu
260 265 270

Ala Leu Lys Glu Ala Val Asp Val Val Thr Ala Ile Thr Gly Ser Lys
275 280 285

Asp Val Asn Met Leu Gly Ala Cys Ser Gly Gly Ile Thr Cys Thr Ala
290 295 300

Leu Leu Gly His Tyr Ala Ala Ile Gly Glu Asn Lys Val Asn Ala Leu
305 310 315 320

Thr Leu Leu Val Ser Val Leu Asp Thr Thr Leu Asp Ser Asp Val Ala
325 330 335

Leu Phe Val Asn Glu Gln Thr Leu Glu Ala Ala Lys Arg His Ser Tyr
340 345 350

Gln Ala Gly Val Leu Glu Gly Arg Asp Met Ala Lys Val Phe Ala Trp
355 360 365

Met Arg Pro Asn Asp Leu Ile Trp Asn Tyr Trp Val Asn Asn Tyr Leu
370 375 380

Leu Gly Asn Glu Pro Pro Val Phe Asp Ile Leu Phe Trp Asn Asn Asp
385 390 395 400

Thr Thr Arg Leu Pro Ala Ala Phe His Gly Asp Leu Ile Glu Leu Phe
405 410 415

Lys Asn Asn Pro Leu Ile Arg Pro Asn Ala Leu Glu Val Cys Gly Thr
420 425 430

Pro Ile Asp Leu Lys Gln Val Thr Ala Asp Ile Phe Ser Leu Ala Gly
435 440 445

Thr Asn Asp His Ile Thr Pro Trp Lys Ser Cys Tyr Lys Ser Ala Gln
450 455 460

Leu Phe Gly Gly Asn Val Glu Phe Val Leu Ser Ser Ser Gly His Ile
465 470 475 480

Gln Ser Ile Leu Asn Pro Pro Gly Asn Pro Lys Ser Arg Tyr Met Thr
485 490 495

Ser Thr Glu Val Ala Glu Asn Ala Asp Glu Trp Gln Ala Asn Ala Thr
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<211> 560

<212> PRT

<213> Pseudomonas cichorii YN2 ; FERM BP-7375

<400> 36

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20 25 30

Ser Thr Leu Arg Ser Val Ala Ala His Gly Leu Arg His Pro Val His
35 40 45

Thr Ala Arg His Ala Leu Lys Leu Gly Gly Gln Leu Gly Arg Val Leu
50 55 60

Leu Gly Asp Thr Leu His Pro Thr Asn Pro Gln Asp Arg Arg Phe Asp
65 70 75 80

Asp Pro Ala Trp Ser Leu Asn Pro Phe Tyr Arg Arg Ser Leu Gln Ala
 85 90 95
 Tyr Leu Ser Trp Gln Lys Gln Val Lys Ser Trp Ile Asp Glu Ser Asn
 100 105 110
 Met Ser Pro Asp Asp Arg Ala Arg Ala His Phe Ala Phe Ala Leu Leu
 115 120 125
 Asn Asp Ala Val Ser Pro Ser Asn Ser Leu Leu Asn Pro Leu Ala Ile
 130 135 140
 Lys Glu Ile Phe Asn Ser Gly Gly Asn Ser Leu Val Arg Gly Ile Gly
 145 150 155 160
 His Leu Val Asp Asp Leu Leu His Asn Asp Gly Leu Pro Arg Gln Val
 165 170 175
 Thr Arg His Ala Phe Glu Val Gly Lys Thr Val Ala Thr Thr Thr Gly
 180 185 190
 Ala Val Val Phe Arg Asn Glu Leu Leu Glu Leu Ile Gln Tyr Lys Pro
 195 200 205
 Met Ser Glu Lys Gln Tyr Ser Lys Pro Leu Leu Val Val Pro Pro Gln
 210 215 220
 Ile Asn Lys Tyr Tyr Ile Phe Asp Leu Ser Pro His Asn Ser Phe Val
 225 230 235 240
 Gln Phe Ala Leu Lys Asn Gly Leu Gln Thr Phe Val Ile Ser Trp Arg
 245 250 255
 Asn Pro Asp Val Arg His Arg Glu Trp Gly Leu Ser Thr Tyr Val Glu
 260 265 270
 Ala Val Glu Glu Ala Met Asn Val Cys Arg Ala Ile Thr Gly Ala Arg
 275 280 285
 Glu Val Asn Leu Met Gly Ala Cys Ala Gly Gly Leu Thr Ile Ala Ala
 290 295 300
 Leu Gln Gly His Leu Gln Ala Lys Arg Gln Leu Arg Arg Val Ser Ser
 305 310 315 320
 Ala Thr Tyr Leu Val Ser Leu Leu Asp Ser Gln Leu Asp Ser Pro Ala
 325 330 335
 Thr Leu Phe Ala Asp Glu Gln Thr Leu Glu Ala Ala Lys Arg Arg Ser
 340 345 350
 Tyr Gln Lys Gly Val Leu Glu Gly Arg Asp Met Ala Lys Val Phe Ala
 355 360 365

Trp Met Arg Pro Asn Asp Leu Ile Trp Ser Tyr Phe Val Asn Asn Tyr
 370 375 380

Leu Met Gly Lys Glu Pro Pro Ala Phe Asp Ile Leu Tyr Trp Asn Asn
 385 390 395 400

Asp Asn Thr Arg Leu Pro Ala Ala Leu His Gly Asp Leu Leu Asp Phe
 405 410 415

Phe Lys His Asn Pro Leu Ser His Pro Gly Gly Leu Glu Val Cys Gly
 420 425 430

Thr Pro Ile Asp Leu Gln Lys Val Thr Val Asp Ser Phe Ser Val Ala
 435 440 445

Gly Ile Asn Asp His Ile Thr Pro Trp Asp Ala Val Tyr Arg Ser Thr
 450 455 460

Leu Leu Leu Gly Gly Glu Arg Arg Phe Val Leu Ala Asn Ser Gly His
 465 470 475 480

Val Gln Ser Ile Leu Asn Pro Pro Asn Asn Pro Lys Ala Asn Tyr Leu
 485 490 495

Glu Gly Ala Lys Leu Ser Ser Asp Pro Arg Ala Trp Tyr Tyr Asp Ala
 500 505 510

Lys Pro Val Asp Gly Ser Trp Trp Thr Gln Trp Leu Gly Trp Ile Gln
 515 520 525

Glu Arg Ser Gly Ala Gln Lys Glu Thr His Met Ala Leu Gly Asn Gln
 530 535 540

Asn Tyr Pro Pro Met Glu Ala Ala Pro Gly Thr Tyr Val Arg Val Arg
 545 550 555 560

Lys His Thr Asp Ser Trp Trp Leu His Trp Gln Ala Trp Gln Ala Gln
 515 520 525

Arg Ser Gly Glu Leu Lys Lys Ser Pro Thr Lys Leu Gly Ser Lys Ala
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Tyr Pro Ala Gly Glu Ala Ala Pro Gly Thr Tyr Val His Glu Arg
 545 550 555

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<213> Artificial Sequence

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<223> Primer for PCR multiplication

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<210> 38

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 38

gggttgagga tgctctggat gtg

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<210> 39

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

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cgagcaagct tgctcctaca ggtgaaggc

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<210> 40

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

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gtattaagct tgaagacgaa ggagtgttg

29

<210> 41

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 41

ggaccaagct tctcgtctca gggcaatgg

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<210> 42

<211> 30

<212> DNA

<213> Artificial Sequence

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<223> Primer for PCR multiplication

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<210> 43

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 43

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<210> 44

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 44

atactcgaga ctactagtcg gttcgtgcac gtacgtgcct ggccg

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<210> 45

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

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atactcgaga ctactagtcg gcacgcgcac gtaagtcctg ggccg

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<210> 46

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

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<210> 47

<211> 58

<212> DNA

<213> Artificial Sequence

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<223> Coding chain for peptide of SEQ ID:1

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<210> 48

<211> 50

<212> DNA

<213> Artificial Sequence

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<223> Complimentary chain for ssDNA of SEQ ID:1

<400> 48

CCGAACCTCC ACCCCGCGCC TTAGAAGGCG GAGTCTGATT CGCATAAACG 50

<210> 49

<211> 58

<212> DNA

<213> Artificial Sequence

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<223> Coding chain for peptide of SEQ ID:2

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<210> 50

<211> 50

<212> DNA

<213> Artificial Sequence

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<223> Complimentary chain for ssDNA of SEQ ID:2

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<210> 51

<211> 58

<212> DNA

<213> Artificial Sequence

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<223> Coding chain for peptide of SEQ ID:3

<400> 51

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<210> 52

<211> 50

<212> DNA

<213> Artificial Sequence

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<223> Complimentary chain for ssDNA of SEQ ID:3

<400> 52

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<210> 53

<211> 58

<212> DNA

<213> Artificial Sequence

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<223> Coding chain for peptide of SEQ ID:4

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<210> 54

<211> 50

<212> DNA

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<400> 54

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<210> 55

<211> 58

<212> DNA

<213> Artificial Sequence

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<223> Coding chain for peptide of SEQ ID:5

<400> 55

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<210> 56

<211> 50

<212> DNA

<213> Artificial Sequence

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<223> Complimentary chain for ssDNA of SEQ ID:5

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<210> 57

<211> 58

<212> DNA
<213> Artificial Sequence

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<223> Coding chain for peptide of SEQ ID:6

<400> 57

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<210> 58

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<223> Complimentary chain for ssDNA of SEQ ID:6

<400> 58

CCGAACCTCC ACCCTGACTA TGAGGACTCA TCGGCCCAT AGTAGTATTG 50

<210> 59

<211> 58

<212> DNA

<213> Artificial Sequence

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<223> Coding chain for peptide of SEQ ID:7

<400> 59

GATCCCATCA TCATCCGGAG AATTTGGATT CTACTTTTCA GGGTGGAGGT TCGGAGCT 58

<210> 60

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:7

<400> 60

CCGAACCTCC ACCCTGAAAA GTAGAATCCA AATTCTCCGG ATGATGATGG 50

<210> 61

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:8

<400> 61

GATCCGCTGC TCATTTTGAG CCTCAGACTA TGCCTATGAT TGGTGGAGGT TCGGAGCT 58

<210> 62

<211> 50
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<223> Complimentary chain for ssDNA of SEQ ID:8

<400> 62
CCGAACCTCC ACCAATCATA GGCATAGTCT GAGGCTCAAA ATGAGCAGCG 50

<210> 63
<211> 58
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<223> Coding chain for peptide of SEQ ID:9

<400> 63
GATCCGATCA TCAGCTTCAT CGTCCTCCGC ATATGATGAG GGGTGGAGGT TCGGAGCT 58

<210> 64
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<223> Complimentary chain for ssDNA of SEQ ID:9

<400> 64
CCGAACCTCC ACCCCTCATC ATATGCGGAG GACGATGAAG CTGATGATCG 50

<210> 65
<211> 58
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<220>
<223> Coding chain for peptide of SEQ ID:10

<400> 65
GATCCGTTTC GCGTCATCAG TCGTGGCATC CGCATGATCT TGGTGGAGGT TCGGAGCT 58

<210> 66
<211> 50
<212> DNA
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<220>
<223> Complimentary chain for ssDNA of SEQ ID:10

<400> 66
CCGAACCTCC ACCAAGATCA TGCGGATGCC ACGACTGATG ACGCGAAACG 50

<210> 67
<211> 58
<212> DNA
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<220>
<223> Coding chain for peptide of SEQ ID:11

<400> 67
GATCCATGAT GCAGAGGGAT CATCATCAGC ATAATGCGCA GGGTGGAGGT TCGGAGCT 58

<210> 68
<211> 50
<212> DNA
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<220>
<223> Complimentary chain for ssDNA of SEQ ID:11

<400> 68
CCGAACCTCC ACCCTGCGCA TTATGCTGAT GATGATCCCT CTGCATCATG 50

<210> 69
<211> 58
<212> DNA
<213> Artificial Sequence

<220>
<223> Coding chain for peptide of SEQ ID:12

<400> 69
GATCCGTTAC TCTTCATACG GTGGATCATG CGCCGCAAGA TGGTGGAGGT TCGGAGCT 58

<210> 70
<211> 50
<212> DNA
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<223> Complimentary chain for ssDNA of SEQ ID:12

<400> 70
CCGAACCTCC ACCATCTTGC GGCGCATGAT CCACCGTATG AAGAGTAACG 50

<210> 71
<211> 58
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<220>
<223> Coding chain for peptide of SEQ ID:13

<400> 71
GATCCTCTGT TTCTGTGGGT ATGAAGCCGA GTCCTAGGCC TGGTGGAGGT TCGGAGCT 58

<210> 72
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<220>
<223> Complimentary chain for ssDNA of SEQ ID:13

<400> 72
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<210> 73
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<212> DNA
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<220>
<223> Coding chain for peptide of SEQ ID:14

<400> 73
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<210> 74
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<400> 74
CCGAACCTCC ACCCAACACA TGAGTACGAG GCTTCATAGA CTGAAGATGG 50

<210> 75
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<220>
<223> Coding chain for peptide of SEQ ID:15

<400> 75
GATCCATTCC TAATGCTGAG ACTTTGCGTC AGCCTGCGCG TGGTGGAGGT TCGGAGCT 58

<210> 76
<211> 50
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<220>
<223> Complimentary chain for ssDNA of SEQ ID:15

<400> 76

CCGAACCTCC ACCACGCGCA GGCTGACGCA AAGTCTCAGC ATTAGGAATG 50

<210> 77

<211> 58

<212> DNA

<213> Artificial Sequence

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<223> Coding chain for peptide of SEQ ID:16

<400> 77

GATCCGTTTCG CGTCATCAGT TCGTGGCATC CGCATGATCT TGGTGGAGGT TCGGAGCT 58

<210> 78

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:16

<400> 78

CCGAACCTCC ACCAAGATCA TCGGATGCC ACGAACTGAT GACGCGAACG 50

<210> 79

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:17

<400> 79

GATCCACGGT GCCGATTTAT AATACGGGGA TTTTGAGGAC GGGTGGAGGT TCGGAGCT 58

<210> 80

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:17

<400> 80

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<210> 81

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:18

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GATCCTATAC TATGCATCAT GGGTCGACGT TTATACGGCG GGGTGGAGGT TCGGAGCT 58

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<211> 50
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<220>
<223> Complimentary chain for ssDNA of SEQ ID:18

<400> 82
CCGAACCTCC ACCCGCCGT ATAAACGTCG ACCCATGATG CATAGTATAG 50

<210> 83
<211> 58
<212> DNA
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<223> Coding chain for peptide of SEQ ID:19

<400> 83
GATCCTCGAT GATGCATGTG AATATTCGTC TCGGGATTCT TGGTGGAGGT TCGGAGCT 58

<210> 84
<211> 50
<212> DNA
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<220>
<223> Complimentary chain for ssDNA of SEQ ID:19

<400> 84
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<210> 85
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<212> DNA
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<220>
<223> Coding chain for peptide of SEQ ID:20

<400> 85
GATCCGCGCC GATGCATCAT ATGAAGAGTC TGTATCGGGC GGGTGGAGGT TCGGAGCT 58

<210> 86
<211> 50
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<223> Complimentary chain for ssDNA of SEQ ID:20

<400> 86

CCGAACCTCC ACCCGCCCGA TACAGACTCT TCATATGATG CATCGGCGCG 50

<210> 87

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:21

<400> 87

GATCCATGAT GCAGAGGGAT CATCATCAGC ATATGCGCAG GGGTGGAGGT TCGGAGCT 58

<210> 88

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:21

<400> 88

CCGAACCTCC ACCCCTGCGC ATATGCTGAT GATGATCCCT CTGCATCATG 50

<210> 89

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:22

<400> 89

GATCCATGAA GACTCATCAT GGTAATAATG CCGTGTTTCT GGGTGGAGGT TCGGAGCT 58

<210> 90

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:22

<400> 90

CCGAACCTCC ACCGAGAAAC ACCGCATTAT TACCATGATG AGTCTTCATG 50

<210> 91

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:23

<400> 91

GATCCTTGGA GCCGCTTCCT CATACTCCTC GGATGTATGC GGGTGGAGGT TCGGAGCT 58

<210> 92

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:23

<400> 92

CCGAACCTCC ACCCGCATAC ATCCGAGGAG TATGAGGAAG CGGCTCCAAG 50

<210> 93

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:24

<400> 93

GATCCCAGCT GTATGAGCCT GATTCTGGGC CGTGGGCTCC GGGTGGAGGT TCGGAGCT 58

<210> 94

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:24

<400> 94

CCGAACCTCC ACCCGGAGCC CACGGCCCAG AATCAGGCTC ATACAGCTGG 50

<210> 95

<211> 58

<212> DNA

<213> Artificial Sequence

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<223> Coding chain for peptide of SEQ ID:25

<400> 95

GATCCTGGAT GACTAAGATG CCTACTACGC ATACTAGGTA TGGTGGAGGT TCGGAGCT 58

<210> 96

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:25

<400> 96

CCGAACCTCC ACCATACCTA GTATGCGTAG TAGGCATCTT AGTCATCCAG 50

<210> 97

<211> 58

<212> DNA

<213> Artificial Sequence

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<223> Coding chain for peptide of SEQ ID:26

<400> 97

GATCCCATCA TCCTATGTAT TCTATGACTA GGGCGTTGCC TGGTGGAGGT TCGGAGCT 58

<210> 98

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:26

<400> 98

CCGAACCTCC ACCAGGCAAC GCCCTAGTCA TAGAATACAT AGGATGATGG 50

<210> 99

<211> 58

<212> DNA

<213> Artificial Sequence

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<223> Coding chain for peptide of SEQ ID:27

<400> 99

GATCCGGTAG TGCTCATTCT CGGAATGATG CTGCTCCTGT GGGTGGAGGT TCGGAGCT 58

<210> 100

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:27

<400> 100

CCGAACCTCC ACCCAGGGA GCAGCATCAT TCCGAGAATG AGCACTACCG 50

<210> 101

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:28

<400> 101

GATCCCATTC GCCTTTGATG CAGTATCATA TGTCGGGTAC GGGTGGAGGT TCGGAGCT 58

<210> 102

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:28

<400> 102

CCGAACCTCC ACCCGTACCC GACATATGAT ACTGCATCAA AGCGGAATGG 50

<210> 103

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:29

<400> 103

GATCCTATGC GCATATGACG ATGCCGTCTC GGTTTTGCC GGGTGGAGGT TCGGAGCT 58

<210> 104

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:29

<400> 104

CCGAACCTCC ACCCGGCAAA AACCGAGACG GCATCGTCAT ATGCGCATAG 50

<210> 105

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:30

<400> 105

GATCCGCTTG TCCGCCTACG CAGTCTCGGT ATTGCGGTGG AGGTTCCGAG CT 52

<210> 106

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:30

<400> 106

CCGAACCTCC ACCGCAATAC CGAGACTGCG TAGGCGGACA AGCG 44

<210> 107

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:31

<400> 107

GATCCGCTTG TAATGGCATG TTGGCCTTTC AGTGGGTGG AGGTTCGGAG CT 52

<210> 108

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:31

<400> 108

CCGAACCTCC ACCGCACTGA AAGGCCAACA TGCCATTACA AGCG 44

<210> 109

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:32

<400> 109

GATCCGCTTG TACGCCGAAG CCGGGCAAGC ATTGGGTGG AGGTTCGGAG CT 52

<210> 110

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:32

<400> 110

CCGAACCTCC ACCGCAATGC TTGCCGGCT TCGGCTACA AGCG 44

<210> 111

<211> 972

<212> DNA

<213> Artificial Sequence

<220>

<223> HPR coding artificial sense-sequence

<400> 111

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gagctaagat cagaccctcg tattgccgag agcatccttc gtcttcactt ccacgactgc 180
tttgtaaag gttgtgacgc atcgatcttg ttagacaaca caacatcatt tcgaacagag 240
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ggaaacatta cactcttac aggaactcaa ggacagatca gggtgaattg tagggtggtg 960
aactccaact ct 972

<210> 112

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 112

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accttctacg acaattcatg tcctaattgc tctaaccatcg tacgggatac tattgtcaat 120

<210> 113
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<220>
<223> Primer for PCR multiplication

<400> 113
gtttatgcc accaaacccc accaagcaag 30

<210> 114
<211> 120
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<220>
<223> Primer for PCR multiplication

<400> 114
tgttgtctaa caagatcgat gcgtcacaa cattaacaaa gcagtcgtgg aagtgaagac 60
gaaggatgct cgcggcaata cgagggtctg atcttagctc attgacaata gtatcccgta 120

<210> 115
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<212> DNA
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<220>
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<400> 115
tgttgtctaa caagatcgat gcgtcacaa 30

<210> 116
<211> 120
<212> DNA
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<220>
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<400> 116
atcgatcttg ttagacaaca caacatcatt tcgaacagag aaagatgcgt ttggaaacgc 60
aaactcggca agaggatttc cagtgatga tagaatgaaa gccgcgggtg agagtgcattg 120

<210> 117
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<220>

<223> Primer for PCR multiplication

<400> 117

atcgatcttg ttagacaaca caacatcatt 30

<210> 118

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 118

tcttctgccc aaaggaactc tccaagaagg acctcccgcc aaagtacag attgttgagc 60

tgcaatgggtg agcaaactcg cgcatgaaac ggttcttggg catgcactct ccaccgcggc 120

<210> 119

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 119

tcttctgccc aaaggaactc tccaagaagg 30

<210> 120

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 120

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ttccagctcc attcttcaca ctccacaac ttaaagacag ctttagaaat gttggcctca 120

<210> 121

<211> 30

<212> DNA

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<400> 121

gagttccttt gggcagaaga gatagcttac 30

<210> 122

<211> 120
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<400> 122
ccggtgttgc tgaagttgta taatctgtcc ataataaacc gacactgatt ttaccaaaat 60
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<210> 123
<211> 30
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<400> 123
ccggtgttgc tgaagttgta taatctgtcc 30

<210> 124
<211> 120
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<220>
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<400> 124
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<210> 125
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
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<400> 125
tacaacttca gcaacaccgg ttaccggat 30

<210> 126
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<212> DNA
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<220>
<223> Primer for PCR multiplication

<400> 126

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cgagattcac atagtatttg ttgtcaaaaa tcgttggcgt acgtagatca aaatccacca 120

<210> 127

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 127

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<211> 120

<212> DNA

<213> Artificial Sequence

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<223> Primer for PCR multiplication

<400> 128

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<210> 129

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 129

ctctagcccc aatgccactg acacaatccc 30

<210> 130

<211> 72

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 130

agagtggag ttaccacccc tacaattcaa cctgatctgt ccttgagttc ctgtaagagg 60

tgtaatgttt cc 72

<210> 131
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for PCR multiplication

<400> 131
agagttggag ttcaccaccc tacaattcaa 30

<210> 132
<211> 58
<212> DNA
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<220>
<223> Primer for PCR multiplication

<400> 132
agtccgatcc gtttatgcga atcagactcc gccttctaag gcgcggggtg gaggttcg 58

<210> 133
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for PCR multiplication

<400> 133
aggcctcgag agagttggag ttcaccaccc taca 34

<210> 134
<211> 1695
<212> DNA
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<220>
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<400> 134
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gatgcagtga aagttaccct cggtcacaaa ggccgtaacg tagttctgga taaatctttc 180
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<210> 135

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 135

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gacgtaaaat tcggtaacga cgctcgtgtg aaaatgctgc gcggcgtaaa cgtactggca 120

<210> 136

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 136

gtttatgcga atcagactcc gccttctaag 30

<210> 137

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 137

gagcaacgga aacaccatct ttggtgatgg tcggtgcacc gaaagattta tccagaacta 60

cgttacggcc ttttgaccg agggtaactt tcactgcac tcgagctacg tttacgccgc 120

<210> 138

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 138

gagcaacgga aacaccatct ttggtgatgg 30

<210> 139

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 139

agatgggtgt tccgttgctc gtgaaatcga actggaagac aagttcgaaa atatgggtgc 60

gcagatgggtg aaagaagttg cctctaaagc aaacgacgct gcaggcgacg gtaccaccac 120

<210> 140

<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for PCR multiplication

<400> 140
agatggtgtt tccgttgctc gtgaaatcga 30

<210> 141
<211> 120
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for PCR multiplication

<400> 141
aaccgctttg tcgataccac gtttcaggtc catcggttc atgccgcag caacagcttt 60
cagaccitca gtgatgatag cctgagccag tacggttgca gtggtgttac cgtcgctgc 120

<210> 142
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for PCR multiplication

<400> 142
aaccgctttg tcgataccac gtttcaggtc 30

<210> 143
<211> 120
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for PCR multiplication

<400> 143
gtggtatcga caaagcgggt accgctgcag ttgaagaact gaaagcgtg tccgtaccat 60
gctctgactc taaagcgatt gctcaggftg gtaccatctc cgctaactcc gacgaaaccg 120

<210> 144
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for PCR multiplication

<400> 144

gtggtatcga caaagcgggtt accgctgcag 30

<210> 145

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 145

tcaaccacgt ccagttcgtc ctgcagaccg gtaccgtctt caacggatgat aacgccttct 60

ttaccgactt tgtccatcgc ttcagcgatc agtttaccta cggtttcgtc ggagttagcg 120

<210> 146

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 146

tcaaccacgt ccagttcgtc ctgcagaccg 30

<210> 147

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 147

gacgaactgg acgtggttga aggtatgcag ttcgaccgtg gctacctgtc tccttacttc 60

atcaacaagc cggaaactgg cgcagtagaa ctggaaagcc cgttcacccct gctggctgac 120

<210> 148

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 148

gacgaactgg acgtggttga aggtatgcag 30

<210> 149

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 149

cttcgccttc tacatcttca gcgatgataa gcagcgggtt gcctgctttg gcaacagctt 60

ccagaaccgg cagcatttcg cggatgttgg agattttctt gtcagccagc aggatgaacg 120

<210> 150

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 150

cttcgccttc tacatcttca gcgatgataa 30

<210> 151

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 151

tgaagatgta gaaggcgaag cgctggcaac tgctgttggt aacaccattc gtggcatcgt 60

gaaagtcgct gcggitaaag caccgggctt cggcgatcgt cgtaaagcta tgctgcagga 120

<210> 152

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 152

tgaagatgta gaaggcgaag cgctggcaac 30

<210> 153

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 153

cacaacacgt ttagcctgac ccaggctctc cagggttgct tttccagct ccataccgat 60

ctcttcagag atcacggtac cgccagtcag ggttgcgata tctgcagca tagctttacg 120

<210> 154

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 154

cacaacacgt ttagcctgac ccaggctctc 30

<210> 155

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 155

gtcaggctaa acgtgttgatg atcaacaaag acaccaccac tatcatcgat ggcgtgggtg 60

aagaagctgc aatccagggc cgtgttgctc agatccgtca gcagattgaa gaagcaactt 120

<210> 156

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 156

gtcaggctaa acgtgttgatg atcaacaaag 30

<210> 157

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 157

tctttcattt caacttcggt agcagcacc acccttgataa ctgcaacgcc gcctgccagt 60

ttcgctacgc gttcctgcag tttttcacgg tcgtagtcag aagttgcttc ttcaatctgc 120

<210> 158

<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for PCR multiplication

<400> 158
tctttcattt caacttcggt agcagcaccc 30

<210> 159
<211> 120
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for PCR multiplication

<400> 159
accgaagttg aaatgaaaga gaaaaaagca cgcgttgaag atgccctgca cgcgaccgt 60
gctgcggtag aagaaggcgt ggttgctggt ggtggtgttg cgctgatccg cgtagcgtct 120

<210> 160
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for PCR multiplication

<400> 160
accgaagttg aaatgaaaga gaaaaaagca 30

<210> 161
<211> 120
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for PCR multiplication

<400> 161
agttcaatac gatctgacgc agcggagctt ccattgcacg cagtgcaact ttgataccca 60
cgttctggtc ttcgttctga ccacgcaggt cagccagttt agacgctacg cgatcagcg 120

<210> 162
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer for PCR multiplication

<400> 162

agttcaatac gatctgacgc agcggagctt 30

<210> 163

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 163

gcgtcagatc gtattgaact gcggcgaaga accgtctgtt gttgctaaca ccgttaaagg 60

cggcgacggc aactacggtt acaacgcagc aaccgaagaa tacggcaaca tgatcgacat 120

<210> 164

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 164

gcgtcagatc gtattgaact gcggcgaaga 30

<210> 165

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 165

caggtcggta accatgcatt cggtggatgat catcaggcca gccacagaag ctgcgtactg 60

cagagcagaa cgagttactt tggttgggtc caggataccc atgtcgatca tgttgccgta 120

<210> 166

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 166

caggtcggta accatgcatt cggtggatgat 30

<210> 167

<211> 95

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 167

ttacatcatg ccgcccattgc caccatgcc gccataccg ccagcagcgc ctaagtcagc 60

tgcatcgttt ttggcagggt cggtaacat gcatt 95

<210> 168

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 168

aggcctcgag ttacatcatg ccgcccattgc 30

<210> 169

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 169

ttacatcatg ccgcccattgc caccatgcc gcc 33

<210> 170

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> anodisk membrane-binding peptide

<400> 170

Tyr Ala Gln Thr Pro Pro Ser Arg

1

5

<210> 171

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> anodisk membrane-binding peptide

<400> 171

Leu Tyr Ala Gln Gln Thr Pro Pro Ser Arg Ser Arg
1 5 10

<210> 172
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> anodisk membrane-binding peptide

<400> 172
Val Tyr Ala Asn Gln Thr Pro Pro Ser Arg Ala Arg Ala Lys Ala Arg
1 5 10 15

<210> 173
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> anodisk membrane-binding peptide

<400> 173
Val Tyr Ala Asn Gln Thr Pro Pro Ser Lys Ala Arg Tyr Ala Gln
1 5 10 15
Thr Pro Pro Ser Arg
20

<210> 174
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Coding chain for peptide of SEQ ID:170

<400> 174
GATCCTATGC GCAGACTCCG CCTTCTCGGG GTGGAGGTTC GGAGCT 46

<210> 175
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Complimentary chain for ssDNA of SEQ ID:170

<400> 175
CCGAACCTCC ACCCCGAGAA GGCGGAGTCT GCGCATAG 38

<210> 176
<211> 58
<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:171

<400> 176

GATCCCTCTA TGC GCAACAG ACTCCGCCTT CTCGGTCTCG GGGTGGAGGT TCGGAGCT 58

<210> 177

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:171

<400> 177

CCGAACCTCC ACCCCGAGAC CGAGAAGGCG GAGTCTGTTG CGCATAAGAG 50

<210> 178

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:1

<400> 178

GATCCGTTTA TGCGAATCAG ACTCCGCCTT CTCGCGCAGC CGCAAAGGCG CGGGGTGGAG 60
GTTCCGAGCT 70

<210> 179

<211> 62

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:1

<400> 179

CCGAACCTCC ACCCCGCGCC TTGCGCGTG CGCGAGAAGG CGGAGTCTGA TTCGCATAAA 60
CG 62

<210> 180

<211> 82

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:1

<400> 180

GATCCGTTTA TGCGAATCAG ACTCCGCCTT CTAAGGCGCG GTATGCGCAG ACTCCGCCTT 60
CTCGGGGTGG AGGTTCCGAG CT 82

<210> 181

<211> 74

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:1

<400> 181

CCGAACCTCC ACCCGAGAA GCGGAGTCT GCGCATACCG CGCCTTAGAA GCGGAGTCT 60

GATTCGCATA AACG

74